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ABSTRACT

This observer training manual was developed as a central component of a research effort, Changing Teacher Practice (CTP), which was designed to increase the frequency of effective teaching behaviors and staff development strategies in an ongoing school system. The observations focused on two major aspects of classroom teaching--instruction and classroom organization. After an introduction, an overview of the observation process is presented. Four sections provide guidelines for each component of observation: (1) the Barnes Teacher Observation Instrument (BTOI); (2) the Observation Record; (3) the Summary Paragraph; and (4) the Student Engagement Ratings (SER) form. Appendices include a guide for classroom protocol, a list of concepts and terms, a table of random numbers for use with SER forms, a brief description on the observer training, examples of the completed forms, the research basis for the BTOI, and a checklist for observations. (JD)

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# OBSERVER TRAINING MANUAL FOR THE CHANGING TEACHER PRACTICE STUDY

Susan Barnes

Revised Manual

Report No. 9050

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Research and Development Center for Teacher Education
The University of Texas at Austin
Austin, Texas 78712

# OBSERVER TRAINING MANUAL FOR THE CHANGING TEACHER PRACTICE STUDY

Susan Barnes

Revised Manual

Report No. 9050

Research in Teacher Education Program
Gary A. Griffin, Program Director
July 1983

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## Preface

This observer training manual was developed as a central component of an experimental study conducted by the Research in Teacher Education (RITE) program of the Research and Development Center for Teacher Education at the University of Texas at Austin. The research effort, Changing Teacher Practice (CTP), was designed to increase the frequency of effective teaching behaviors and staff development strategies in an ongoing school system.

The CTP study emerged as a consequence of concerns that research on teaching findings and research on teacher and school change findings were not observable, to any great extent, in staff development programs or in typical American schools and classrooms. After more than a decade of systematic and fruitful systematic inquiry into teaching and school change, the results of that inquiry appeared to be making minimal impact upon school practices.

RITE examined carefully the large-scale studies of teaching and schooling as a means to select the findings that were most applicable across settings and that were discovered as a consequence of the most rigorous research procedures. This examination resulted in two documents that, together, served as content for an experiment designed to affect staff developer and teacher behavior. A twenty-three hour intervention, conducted over five consecutive days prior to the opening of the 1982 school year, was attended by a group of staff developers (principals and resource teachers) in an urban West Coast school district. Near the conclusion of the intervention, each participant selected from the intervention those teaching behaviors and staff development strategies that seemed most appropriate for his or her school site.

The observer training manual described in this document was developed as a research tool for RITE staff as we observed teachers from the first day of school on an intermittent schedule that ended six months later. We needed a reliable means to determine the degree to which the teaching behaviors focused upon in the intervention were present in both experimental and control groups of teachers. The procedures described in this manual resulted in a high level of interobserver agreement and the observation instrument itself provided the necessary focus on research-derived teaching behaviors.

Susan Barnes' contribution to the CTP study, through the development of the synthesis of research on teaching document (cited in Appendix F) to the formulation of the observation instrument and accompanying training materials, was invaluable to the conduct of the research. Her work is intellectually sound and methodologically rigorous. This document reflects only a fraction of her contribution to the larger study.

It is important to recognize that this observation system and the methods used to implement it are research tools. They were not designed for teacher evaluation or other purposes. We believe, however, that this system of examining teacher behavior can be useful as one way to "see" and reflect upon one aspect of teaching, the demonstration of research-based effective teaching behaviors. We also believe that teaching is a good deal more than what is reflected here and in the CTP study. We hope that researchers, teachers, and others will find this manual useful but that they will recognize its limitations as well as its possibilities.

Gary A. Griffin

Principal Investigator

## Introduction

This manual provides information for conducting observations for the RITE Changing Teacher Practice Study (Griffin, G., Barnes, S., Defino, M., Edwards, S., Hukill, H., & O'Neal, S., Note 1). The manual is divided into six sections. After an introduction, an overview of the observation process is presented. The following four sections provide guidelines for each component of the observation: the Barnes Teacher Observation Instrument (BTOI), the Observation Record, the Summary Paragraph, and the Student Engagement Ratings (SER) form (Evertson, C., Emmer, E., Sanford, J., Clements, B., Martin, J., & Worsham, M., Note 2). The appendices include a guide for classroom protocol, a list of concepts and terms, a table of random numbers for use with SERs, a brief description of the observer training, examples of the completed forms, the research basis for the BTOI, and finally a checklist for observations.

## Overview of the Observation Process

Prior to the observation the observer receives a schedule of upcoming observations. It is the responsibility of the observer to contact the teacher (probably over the telephone) to confirm the scheduled observation. During the observation the observer first constructs a floor plan and seating chart of the classroom. Then the observer records on the Observation Record form the occurrence of any teaching behaviors listed on the BTOI. At ten minute intervals the observer also conducts a Student Engagement Rating and records those results. After the observation a Summary Paragraph is composed. A completed observation results in four items: the Observation Record form, a Summary Paragraph, a floor plan/ seating chart, and the Student Engagement Rating form.

## Guidelines for Using the Barnes Teacher Observation Instrument

The observation instrument is intended to yield a great deal of information at a low level of inference. This information will include frequencies of specific teaching behaviors, sequence of teaching behaviors, number of students involved in various classroom activities, which particular students are involved in which activities and how often, specific examples of teacher statements, rules or procedures, student reactions to teacher requests, and duration of various activities.

The Barnes Teacher Observation Instrument (BTOI, Figure 1) will be used by RITE staff members and trained observers to observe classroom teachers for the desired teaching behaviors. These observations are focused on several categories of teaching behaviors: planning and preparation, presentation of content, interactions, conducting practice, conducting seatwork, holding students responsible for assignments, organizing the classroom, presentation of rules or procedures, holding students responsible for behavior, and reacting to student behavior.

The observations focus on two major aspects of classroom teaching--instruction and classroom organization. Because of the reality of the classroom, the focus of the teacher will often fluctuate between these two functions over the course of an observation. It is up to the trained observer to decide the primary focus of the teacher and record those changes. If the teacher is primarily focusing on instruction, then categories A-F will generally be used. If the focus of the teacher is on classroom organization and behavior, then categories G-J will generally be used. It is possible for items in category I (Holds Students Responsible for Behavior) to be interspersed in the observation when the teacher is instructing because of the

BEST COPY AVAILABLE

A. Planning and preparation
1. t. allocates time per academics
2. t. posts assignments for day
3. t. post. assignments for week
4. t. provides calendar w/ass'mts

B. Presentation
1. t. gives/seeks rationale for lesson
2. t. presents new info. or content
3. t. refers to previous lesson content
4. t. uses materials
   a. kinds
   b. supply
   c. corrections made
5. t. divides complex tasks into steps
6. t. gives demonstration
7. t. uses concrete examples
8. t. makes comparisons
9. t. points out patterns
10. t. uses ex. related to Ss interests
11. t. gives directions
12. t. relates new activity to previous or future activity

C. Interactions
1. t. asks questions where Ss provide "the" answer (Product ques.)
   a. correct
   b. incorrect
   c. no answer
2. t. asks questions where Ss provide "how" and "why" (Process ques.)
   a. correct
   b. incorrect
   c. no answer
3. t. calls on Ss
   a. non-volunteers
   b. in predetermined pattern
   c. accepts callouts
   d. volunteers - hands up
4. t. waits for Ss to respond to ques.
5. t. explains "how" or "why" the ans. was obtained (process explanation)
6. t. accepts academic comments by Ss during lesson
7. t. accepts content questions during lesson
8. t. accepts procedure questions during lesson
9. t. answers content questions asked by Ss after instruction
10. t. answers procedure questions asked by Ss after direction-giving

D. Practice
1. t. conducts practice over new (or old) material in whole group
2. t. checks Ss responses for correctness
3. t. provides feedback
4. t. moves around classroom
5. t. reminds Ss that they should be working or participating
6. t. reminds Ss that work will be checked

E. Seatwork
1. t. watches class after making ass'mt
2. t. reacts to Ss not complying with assignment
3. t. circulates as Ss work
4. t. scans seatwork as Ss work
5. t. gives individuals assistance
6. t. assigns extra credit work to more able Ss
7. t. assigns work using higher cognitive levels (analysis or above)

F. Holds Ss responsible for ass'mts
1. t. makes daily homework ass'mts.
2. t. tells Ss their work will be checked
3. t. tells Ss they must complete ass'mt
4. t. makes ass'mts using procedure
5. t. has Ss record ass'mts in designated place
6. t. requires Ss to keep notebooks to store assignments
7. t. collects assignments daily
8. t. checks/grades papers
9. t. returns graded work to Ss
10. t. communicates make-up work to Ss
11. t. relates Ss work to grades

G. Organizes classroom
1. t. allocates time to teach rules/procedures
2. t. states, posts, or write rules/procedures

H. Presentation of rules/procedures
1. t. provides/seeks a rationale for rules and procedures
2. t. communicates to Ss desired attitude
3. t. communicates to Ss desired behavior
4. t. introduces groups of rules and procedures at different times
5. t. explains rules and procedures in concrete terms
6. t. demonstrates rules & procedures
7. t. breaks complex r&p into steps
8. t. explains cues associated w/r&P
9. t. demonstrates cues
10. t. has Ss practice r&P
11. t. gives feedback on Ss performance
12. t. reteaches r&p
13. t. communicates consequences to Ss

I. Holds Ss responsible for behavior
1. t. observes Ss behavior
2. t. uses r&p for use of materials/areas
3. storing Ss possessions
4. using learning centers
5. Ss use of shared materials, cabinets
6. Ss use of T's desk and area
7. Ss use of drinking fountain/sink
8. Ss use of pencil sharpener
9. Ss use of bathrooms
10. Ss use of out-of-class bathrooms, drinking fountains, office, lib., resource room, health office
11. passing out books and supplies
12. telling Ss which materials to bring to groups
13. playground
14. lunchroom

t. uses r&p for discussion
15. S participation in class disc.
16. talk among Ss during academic presentation
17. talk among Ss during seatwork
18. talk among Ss during freetime

t. uses r&p for movement
19. Ss lining up to leave room
20. Ss coming and going to other areas of school
21. Ss movement into and out of groups
22. Ss leaving seats during academic presentation
23. Ss leaving seats during seatwork
24. Ss leaving seats during free time

t. uses r&p for assignments
25. Ss getting t. attention for help
26. Ss turning work
27. handing back assignments
28. Ss making up work
29. Ss activities after seatwork is finished

t. uses r&p for
30. selecting Ss for helpers
31. using Ss helpers
32. t. uses r&p for Ss conduct during interruptions and delays
33. t. uses r&p for cueing Ss attention

J. Reactions to Ss behavior
1. t. reacts to Ss not following r&p
2. t. reacts to Ss following r&p
3. t. uses consequences for inappropriate behavior
4. t. uses consequences for appropriate behavior
5. t. reacts to undesired attitudes
6. t. reacts to desired attitudes
7. t. uses consequences for undesired attitudes
8. t. uses consequences for desired attitudes

3

Figure 1. Barnes Teacher Observation Instrument

tendency of teachers to attend to behavior and instruction concurrently. The observer must decide whether each statement or action is primarily instructional or managerial in intent.

Many statements, questions, or actions will occur during the observation which are not included on the instrument. Since the purpose of observation is to document the occurrences of the previously identified desired teaching behaviors (Appendix F), the observer should remember to concentrate on instances of the behaviors listed on the instrument instead of trying to record all observed teacher behaviors. If some other behaviors occur during the observation which the observer judges to be important in preserving the sense of the classroom, then the observer may record briefly a description of the behavior in the "Example" column. In this way, the observation instrument will allow for some flexibility to more accurately reflect the variations in classrooms (see Appendix E for examples of completed forms).

The observer will record only the letters and/or numbers which designate a specific teaching behavior. For example, when the observer sees a schedule of the day's activities on the bulletin board, then the observer will record "A.1" on the Observation Record in the "Teaching Behavior" column.

Explanation of Coding Categories

Attention will now turn to an explanation of the various coding categories. Only those categories judged by the RITE staff to require elaboration have been included.

A. Planning and Preparation - The teacher is "looking ahead," using time for academics, and getting organized to present new information to students.

1. t. (teacher) allocates time

Examples:

a. A statement like "Today we will have math before lunch instead of

after lunch."

b. Visible lesson plans

c. Schedules posted in the room for different activities

2. t. posts assignments for day

3. t. posts assignments for week

4. t. provides calendar with assignments

Examples:

a. Teacher maintains an assignment card file for student use with each day's assignment recorded.

b. Teacher writes assignments for the day/week on the board.

c. Teacher passes out to each student a calendar-type chart with assignments designated by day. This could be done on a weekly or biweekly basis, for example.

B. Presentation - The teacher is actively conducting a "lesson," where a lesson involves the presentation of new academic content or where the major purpose of the lesson is the review of old content.

1. t. gives/seeks rationale for lesson--The teacher is telling or asking for a reason why students will benefit from the lesson.

Examples:

1. Statements like "Multiplying will be much faster than adding a long column of the same numbers."

2. Questions like "Why do you think it's important to learn to use the dictionary?"

2. t. presents new information or content--This will include any new "academic" information (as opposed to procedural information discussed in Category H.) Academic information here refers to facts, concepts, generalizations, skills, i.e., the cognitive focus of

teaching. (Procedural information here refers to guidelines about how to do something.)

3. t. refers to previous lesson content--This is usually at the beginning of the lesson and is intended to lead into the new lesson. The content referred to should be from a prior lesson, not content referred to earlier in the current lesson.

4. t. uses materials--When the teacher uses the chalkboard or teacher's manual, for instance, during the observation for instructional purposes indicate in the "Example" column of the Observation Record
   a. kind--what the material is
   b. supply--if there is an adequate supply so that everyone has whatever is needed to participate
   c. corrections made--when the materials were printed incorrectly or a film projector failed to work, for instance, record the adjustments made.

7. t. uses concrete examples

   Examples:
   1. The teacher may use beans for counting.
   2. The teacher may have groups of student arrange themselves in alphabetical order to illustrate alphabetizing.

10. t. relates to Ss (students) interests--The teacher is motivating students by using incidents, names, or topics, for example, that are likely to hold their attention during the academic presentation.

11. t. gives directions--These are guidelines that pertain to particular academic tasks: whether to use pen or pencil, the page numbers of the assignment, come to group, i.e., guidelines related to completing

a product.

12. t. relates new activity to previous or future activity--"Activity" will probably be an assignment, something the students are supposed to do, that is related to other activities. This will usually be at the end of the academic presentation before practice or seatwork is begun or at the beginning of the lesson as an overview of the upcoming tasks.

C. Interactions - The focus in this section is on discussion. It will mainly be seen in the presentation portion of the lesson, however, some interaction will occur during "Seatwork" and "Practice."

1. t. asks questions where Ss provide "the" answer (Product question) - Record in the student participation column whether the student got the answer correct (a), incorrect (b), or gave no answer (c).
2. t. asks questions where students provide "how" and "why" (Process questions) - Record the same as #1.
3. t. calls on students
   a. non-volunteers
   b. in predetermined pattern - use this code if you can tell that the teacher is clearly calling on students by going around the reading circle or going by alphabetical order, for example.
   c. accepts callouts
   d. volunteers-hands up
4. t. waits for S to respond to question--Record for this behavior only if the teacher calls upon a student and waits for that student to answer the question.
5. t. explains "how" and "why" the answer was obtained (Process explanation)

Since this is the most complicated set of codes, an illustration of a sequence of questions and answers may be helpful.

| Time | Teaching Behavior | Example/ Name/ RP | Student Reaction |
|---|---|---|---|
| 9:00 | C.1 | John | |
| | C.3.a | | |
| | C.4 | | a |
| | C.1 | Betty | |
| | C.3.d | | b |
| | C.5 | | |
| | C.1 | Ann | |
| | C.3.a | | b |
| | (Teacher corrects product) | | |

Here the teacher has asked a product question, called on a non-volunteer, John. The teacher waited for John to answer the question which he did correctly. The teacher then asked another product question and called up Betty who had her hand up. Betty did not answer correctly so the teacher provided a process explanation. The teacher then asked another product question, called upon non-volunteer Ann who also answered incorrectly. Because the teacher corrected Ann by stating the correct answer (a behavior for which there is no code), the observer chose to note this to indicate how the interaction was concluded.

6. t. accepts academic comments by Ss during the lesson (presentation) - "During the lesson" refers to the time when the teacher is presenting new content.

9. t. answers content questions asked by students after instruction. "After instruction" refers to the time when the teacher has completed the presentation of new content. If students cannot successfully work with the information during seatwork, the "lesson" may begin again if the teacher reteaches the content.

D. Practice - Practice here refers to "controlled practice" in math (Good et al., Note 3) where the students as a group work for increased speed, accuracy, and proficiency in completing a task or problem under the direct guidance of the teacher immediately after the teacher has explained the task or problem. Feedback on the correctness of responses is quite frequent (at least every two minutes).

E. Seatwork - Practice work that students complete individually at their desks.

F. Holds Ss responsible for assignments - The teacher is holding students accountable for their academic work.

G. Organizes Classroom - This is a parallel category to category "A. Planning and Preparation." The focus here is on classroom and behavior management as it complements the academic side of teaching.

1. t. allocates time to teach rules/procedures - (Guidelines for recording time here are the same as for category A.1.)

H. Presentation of rules/procedures - This category is a parallel to category "B. Presentation." The difference is that here the content of the presentation deals with classroom and behavior management. For example, the teacher is actually <u>teaching</u> students <u>how</u> to line up, <u>how</u> or <u>where</u> to turn in papers. This category will probably be used only during the first weeks of school or with individuals after that time.

4. t. introduces groups of rules and procedures at different times. Use this code if the teacher makes statements to indicate that some rules have already been learned or some rules will be introduced at a later time.

8. t. explains cues associated with rules/procedures. "Cues" are behaviors or statements used by the teacher to gain students'

attention and to prompt students to begin some procedures. For example, the teacher explains that switching off the light means that students should become silent. Cues may also be called "signals."

I. Holds Ss responsible for behavior. These codes are used to record instances where the teacher uses rules/procedures (presumably taught under category "H. Presentation" at some previous time). This category is grouped into subcategories which describe use of rules and procedures for materials/areas (I.3-14), for discussion (I.15-18), for movement (I.19-24), for assignments (I.25-29), and for helpers I.30-31). If the teacher clearly refers to "our procedure" for turning in papers, or unusual behavior is seen (for example, teacher's counting "1, 2, 3, 4, 5," for silence), or rules/procedures are posted, or a clear pattern of student behavior emerges without obvious direction by the teacher, then the observer can assume some rules/procedures are operative. Enter the code and star the entry the first time a behavior, which seems to be a procedure, is seen; the next time the behavior is seen enter just the code. One suggestion to help the observer determine whether a statement refers to a procedure or not is to consider whether complete directions are given such that a student new to the class at that time would know what to do, or whether further explanation would seem necessary.

1. t. observes Ss behavior--The teacher is obviously looking around the room monitoring students' actions (anytime except during "Seatwork" when E.4 is used).

   t. uses rules/procedures for discussion - These codes may be used whenever interactions among students and/or teacher are

occurring except for questioning by the teacher (Codes C.1,2 refer to teacher questioning; C.3 specifically refers to how the teacher choses responders).

15. S. participation in class discussion - This code should be used when there is evidence that the teacher has referred to a rule governing general class discussions such as "Hold up your hand" or "Remember the rule, 'Don't interrupt another person'."

16. Talk among Ss during academic presentation - This code is intended for use when the teacher is making a presentation, students are talking, and the teacher refers to some rule governing conversation during instruction.

18. Talk among Ss during free time - "Free time" occurs when Ss have completed and turned in an assignment (if required) or have not been given an assignment.

J. Reactions to Students' Behavior. These codes refer to teacher reactions to students who are exhibiting or not exhibiting the desired attitudes and behaviors (presented under category "H. Presentation of Rules/Procedures" at some previous time). This category measures the frequency of teacher follow through on rules/procedures and the consistency of that follow through. The key words in this category are "reacts" and "uses consequences." If the observer sees no evidence that the teacher is responding to inappropriate behavior (J.1), appropriate behavior (J.2), undesired attitudes (J.5), or desired attitudes (J.6) in a preplanned manner, then the teacher behavior is coded as a reaction to an immediate situation. If, however, there is evidence that the teacher responds using preplanned and previously communicated (H.13) consequences for inappropriate behavior (J.3), for appropriate behavior (J.4),

undesired attitudes (J.7) or for desired attitudes (J.8), then the teacher behavior is coded as "uses consequences." Notice that J.1 through J.4 refer to behavior, while J.5 through J.8 refer to attitudes. Finally, J.2, J.4, J.6, and J.8 refer to instances where the teacher responds positively to student attitudes and behaviors. Here is where teacher compliments and other such "rewarding" behaviors will be recorded.

## Guidelines for the Observation Record

The Observation Record (Figure 2) is simply the form where the frequencies of teaching behaviors are recorded. Instructions for the use of the form follow.

### Time Column

It is advisable to note time every three or four minutes. Every time a Student Engagement Rating (SER) is taken, the number of the SER should be recorded and circled in the time column. This will allow a person analyzing the SERs to go back to the Observation Record to determine the context of a particular SER.

### Teaching Behavior Column

The coding unit for this column is the occurrence of a new teaching behavior. For example, if the teacher has been circulating around the classroom (code E.3) and stops to work with an individual, the new code (E.5) should be noted. When the teacher begins circulating again, record another E.3.

### Example/Name/Specific Rule or Procedure Column

Whenever the teacher asks questions, calls on a particular student, uses a material or uses a procedure to line up, for instance, these should be noted briefly in this column (Example column, hereafter). In the example of the

teacher moving round and stopping to help an individual, the student's name or other identifier should also be recorded in the "Example" column. If the teacher then moves to help another individual, nothing would be recorded in the "Teaching Behavior" column of the next line but the name of the second student would be entered in the Example column. If the teacher uses the overhead projector, B.4 should be recorded in the Teaching Behavior column and "overhead" in the Example column. When the teacher asks questions (C.1,2); one or two questions should be recorded here for illustrative purposes. Finally, if the teacher uses a rule or procedure (category I), an example of the exact rule or a brief description of the procedure should be indicated in this column. Any time an example of the teacher's comments or actions would be useful in understanding the class, this column may be used for such a record.

Student Reaction to Teacher Request or Direction Column

Whenever the teacher makes a request or directs the class or particular students to some task or action, indicate the number of the students who comply or do not comply. This column should also be used to record whether particular students are generally off-task and the proportion of the class which is off-task. When recording C. Interactions, record whether students answer questions correctly (a), incorrectly (b), or give no answer (c) in this column. Unless mention is made of off-task behavior, it will be assumed that students are on-task, i.e., following the teacher's directions or attending the teacher's presentations. If the teacher corrects, redirects, desists, or cites a rule or direction, then the student or students should be counted as off-task. If the observer sees clear violations of the teacher's directions

| Time | Teaching Behavior | Example/ Name/ Specific Rule or Procedure | Student Reaction to Teacher Request or Direction |
|---|---|---|---|
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Teacher No. _____ Date _____

School _____



Figure 2. Observation Record

Page _____

or requests, then those students may be counted as off-task even if the teacher has not reacted to the violations.

## Guidelines for Summary Paragraphs

The Summary Paragraph (Figure 3) is an avenue to convey more qualitative and impressionistic information about the classroom. Record information about any critical incidents, behavior patterns, or the classroom atmosphere that conveys a flavor of that classroom. Record also your general impression of the teacher and his/her teaching.

## Guidelines for Using the Student Engagement Rating Forms Adapted for the CTP Study

At ten minute intervals, the observer should complete a Student Engagement Rating (Figure 4) to provide researchers with a detailed "snap-shot" of classroom activity by using codes listed on the Coding Key (Figure 5). The SER provides (1) five kinds of information about classroom context at that time, (2) the number of students who can be classified in each of eight different categories of involvement in the task at hand, and (3) a rating of apparent student success. The observer should complete the first rating within the first ten minutes, and then maintain a ten minute interval between all subsequent ratings.

To determine exactly when the first SER is taken, a random number table is provided in Appendix C. At the start of the first observation, the observer randomly selects a number in the table. This means that the first SER will be taken that number of minutes into the observation. All subsequent SERs for that observation are done at ten minute intervals (e.g., if start time is 9:00 and the randomly selected number is 4, the first SER will be taken at 9:04, the second at 9:14, the third at 9:24, and so on). The

Summary Paragraph

Teacher No. _____ Date _____

School _____



Figure 3. Summary Paragraph

STUDENT ENGAGEMENT RATINGS

Teacher # _____ School # _____ Observer # _____

# Students _____ Grade _____ Date _____ AM PM Page _____ of _____

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Time | | | | | |
| Format # of adults | | | | | |
| Subj.-T. | | | | | |
| Subj.-Ss. | | | | | |
| # in room | | | | | |
| # def. on, acad. | | | | | |
| # prob. on, acad. | | | | | |
| # def. on, proc. | | | | | |
| # prob. on, proc. | | | | | |
| # off, unsanc. | | | | | |
| # dead | | | | | |
| # can't see | | | | | |
| Ss Success | | | | | |

| | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|
| Time | | | | | |
| Format # of adults | | | | | |
| Subj.-T. | | | | | |
| Sub.-Ss. | | | | | |
| # in room | | | | | |
| # def. on, acad. | | | | | |
| # prob. on, acad. | | | | | |
| # def. on, proc. | | | | | |
| # prob. on, proc. | | | | | |
| # off, unsanc. | | | | | |
| # dead | | | | | |
| # can't see | | | | | |
| Ss Success | | | | | |

Figure 4. Student Engagement Ratings Form

## CODING KEY

### Formats

1. Teacher presentation to whole class, academic
2. Teacher presentation to whole class, procedural
3. Teacher with small group, rest on same task
4. Teacher with small group, rest on different tasks, same content/subject matter
5. Teacher with small group, rest on different tasks, different content
6. Individual activities, all on same task
7. Individual activities, different tasks
8. Small groups, teacher circulating
9. Classroom routines/ procedures
10. Transition
11. Dead time
12. Adjunct Task
13. Other

### Subject Matter Codes

1. Reading
2. Spelling
3. Handwriting
4. Grammar
5. Reading/Language Arts (comb.)
6. Math
7. Social Studies
8. Science/Health
9. Spanish/Foreign Language
10. Art
11. Music
12. Classroom procedures, routines and rules
13. Social-emotional, affective focus
14. Transition
15. Dead time
16. Other subject area
17. Mixed (other than # 5)
18. Adjunct Activity

Success Ratings:
1 = more than half the class cannot do the task
2 = between four and half the class can't
3 = 3 or 4 can't do it
4 = 1 or 2 can't
5 = all are successful

Figure 5. Coding Key

observer should take an adjacent number in the table for determining the times of first SERs for each subsequent observation.

Also, the observer needs to completely fill out the identification field at the top of each SER form. It matches the identification field on the observation record forms and may be filled out in advance to save time. Again, this procedure is a critical safeguard against loss of valuable data.

Description of Classroom Context

In order to provide information about the context in which the engagement rating was taken, the observer should indicate the format of the classroom, the total number of adults in the classroom, the subject matter on which the teacher is focusing, the subject matter on which most of the students are focusing, and the number of students in the class at the time the rating is taken.

Classroom format. There are 13 categories available to describe the format of the classroom (see the Coding Key on p. 18). The codes are intended to represent how the teacher has organized or structured the class based upon activities or focus of attention of the students. In other words, the format codes provide an overview of how the class is organized during the observation.

Classroom Formats 1 and 2 are similar in that they both have the teacher focusing his/her attention on the entire class at once, and the students' attention is therefore supposed to be directed toward the teacher or something else of central importance. The difference is their content--whether academic or procedural.

1. Teacher presentation to whole class, academic in nature. In order to be classified in this format, activities in the room at the time must meet the above description, and in addition must focus on academic content. Some

examples of this are: the teacher lecturing to the whole class; teacher asking questions and responding to answers from the whole class; teacher giving a science demonstration; teacher reading aloud a story to all of the students; teacher working at the chalkboard; teacher leading a spelling or math drill; teacher using an audio-visual aid, such as overhead projector, film, or television, to which the students are expected to attend; explaining content of assignments to the entire class; reviewing work with the class. If four or fewer students are doing something different while the rest of the class is being taught in this format, then the category should still be used.

2. Teacher presentation to whole class, procedural/behavioral. To be coded in this category, the activities in the classroom must fit the description of instruction given above, but the topic is classroom routines, procedures, rules, or behavior. This format is used frequently in the first few weeks of school, when it is often necessary to instruct students on classroom and school procedures. Examples of it might be describing to the entire class the way that they are to wear their name tags during the week, how they are to care for their books, how they are to enter the room in the morning, sharpen their pencils, go to the bathroom or get water, how they are to hand in their work each day, how they are to make transitions in the room or line up to leave the room, and presentation of an attention-getting signal to the entire class with an explanation of how students are to respond to the signal.

3. Teacher presentation to a small group with others in class working independently. All out-of-group students are on the same task. This means that every out-of-group student is supposed to be working independently on an academic assignment and everyone is working on the same assignment. A typical example is for the teacher to be having a reading lesson with a small group,

while everyone else in the class is supposed to be completing the same ditto sheet.

4. Teacher presentation to small group with others in class working independently. Out-of-group students are on more than one task, but all of their assignments are within the same content area. A typical example of this is the teacher working with a reading group, while other students in the class are also engaged in reading activities. Half of these out-of-group students are supposed to be working with SRA materials, while the other half are supposed to be working on reading worksheets.

5. Teacher presentation to small group with others in class working independently. Out-of-group students are on more than one task in more than one subject matter area. A typical example of this is the teacher working with a small group and listening to them read aloud while some of the out-of-group students are working on handwriting assignments, and while others are working on math assignments.

Formats 6, 7, and 8, are similar in that the teacher's focus of attention is not directed toward teaching a lesson per se. The teacher may be circulating around the room to check on students who are working on academic assignments. The differences have to do with whether the students are grouped or not, and whether they are working on same or different assignments.

6. Independent individual activities. Each student is focused on his or her own individual work. All of the students are working on the same task. An example is the teacher telling everyone to work the same set of 10 problems out of the math book, and then circulating around the room while they are doing it. If the teacher is actually conducting a class discussion by interspersing brief questions with written answers which are immediately discussed, the format is not coded as a 6, but would instead be coded as a 1,

since the focus of the lesson would be the class discussion. The focus of Format 6 is on the students all completing the same assignment, but completing it independently.

7. Independent individual activities. Each student is focused on his or her own individual work. The students are on different tasks. The only difference between this and Format 6 is that more than one assignment has been given to the students, so that not all of the students are doing the same assignment at the same time. There may be times when all of the students may be working on the same thing, and then some students gradually begin working on something else. The convention here is that when 4 or fewer students are doing something different from the rest of the class, the format should be coded as Format 6. When five or more students are doing something different for their individual work, the format should be coded as Format 7.

8. Students are working in small groups. Students are engaged in some kind of group activity, such as playing a game or reading the parts of a play. They are doing this without the direct supervision of the teacher, except when he or she happens to monitor them. If assignments have been given by group, but the students in the group are not working with one another (i.e., they are still doing independent, individual work), it would be coded as Format 7.

Formats 9-13 are similar in that they refer to situations which include all students in the class. Four or fewer students may be engaged in group or individual work, and Formats 9-13 will still be used. (If five or more students are working as a group, use Formats 3-6. If five or more students are working as individuals, then use Format 6 and 7.)

9. Classroom routines/procedures led by the teacher. This category should be used for intervals of time in which preestablished routines such as warm-up and wind-down nonacademic activities, other procedures such as giving

out, turning in, or handing back assignments and checking homework or quiz answers with no elaboration, are taking place under the leadership of the teacher. When a procedure coded Format 9 is taking place, the subject matter code should be 12, classroom procedures and rules.

10. Transition. This category should be used when all students (except four or fewer) leave the room or are moving between small groups or getting out new materials for a different subject or different activity within the room. Subject matter code will be 14.

11. Dead time. This category should be used when the entire class (or all but four or fewer students) has been left in "dead time." The teacher has not given them any definite assignments or communicated any expectations to them about what they are supposed to be doing. An example of this might be finishing a class discussion 5 minutes before lunch and not telling the children what to do then, so that they sit at their seats. Another example might be students waiting for another class to come in to begin some lesson which is team taught. Typically, dead time for an entire class is a short period of time in which the students are waiting for some transition to begin. It can also occur if the teacher is conducting a lesson and is interrupted or called aside, and she leaves the students without making provisions for their doing anything. When Format 11 - Dead time - is coded, subject matter code will be 15.

12. Adjunct task. This applies to tasks that are unrelated to the present academic activity. For example, a discussion of geography in a math class would be coded as adjunct. Other discussions of current events, social activities and similar tasks without any clear relationship to the subject matter of the class is coded as adjunct. When this format code is used, the subject matter code should be 18, Adjunct activity.

13. Other. If there is some activity which cannot be described by the preceding categories, the observer should code the format as 13. There should be a clear description in the Observation Record of what was happening in the class at that time.

As part of the classroom context, it is equally important to review the way in which subject matter is to be coded. The next two items, Subject-teacher focus and Subject-student focus, refer to the categories to be coded after Format on the SER form using the subject matter codes in the right-hand column in the Coding Key (Figure 5, p. 18).

Subject-teacher focus. The observer should note the code number of the subject matter on which the teacher is concentrating at the time. If the teacher is addressing the entire class or a small group, the subject matter is the one that he or she is teaching. If the teacher is circulating about the room while the students are doing seatwork, the subject matter is that assigned to most of the students in the room. A list of categories and code numbers appears below.

Subject-student focus. The observer should note the code number of the subject matter on which most of the students are focusing. In the event that the teacher is working with a small group (Format 3, 4, or 5), this category applies to those students who are out of the group, working at their seats or at other centers. Many times the focus of the teacher and students will be the same. A subject must last for one minute to be coded.

The subject matter codes are:

1 Reading

2 Spelling

3 Handwriting

4 Grammar or other aspects of Language Arts or "English"

5 Reading/Language Arts (Assignments which are a combination of the two subject areas, including anything in Categories 1 through 4 above.)

6 Math

7 Social Studies

8 Science/Health

9 Spanish/Foreign Language

10 Art

11 Music

12 Classroom procedures and rules (see definition given for Format 9, p. 22)

13 Social-emotional, affective focus, such as discussion of a fight or students' feelings

14 Transition (see definition given for Format 10, p.23)

15 Dead time (see definition given for Format 11, p. 23)

16 Other subject area (any academic subject not included in subject matter codes 1-11)

17 Mixed (A combination of two subject areas being taught at the same time other than the combination of Reading and Language Arts, which is categorized as #5. An example would be math, spelling, and reading assignments being worked on at the same time.)

18 Adjunct activity. An adjunct activity includes any instances where topics irrelevant to the main concern of a class are being covered, e.g., math during history class, current events during science, teacher preparation of materials, grading, etc.

There may be occasions in which a single activity is occurring, but it is not clear which subject matter should be noted, since two subjects are actually involved in teaching some content. Examples of this are: learning

to sing songs in Spanish and a science lesson that involves the application of math. In these cases, the observer should decide which is the primary focus of the lesson and categorize that. This is usually evident from the daily schedule or the teacher's announcement about the activity.

Number in class at time. This should be the total number of students who were in the room and could therefore be considered in the Student Engagement Rating. This may not represent the number of students attending class that day, since students may be in the bathroom or in other places in the school at the time of the rating. The seven categories which immediately follow this "# in room" should add up to the number recorded here.

Categories of Student Engagement

Every child in the classroom should be noted as to her/his engagement using one of the categories described.

Definitely on-task, academic. Students classified in this category are those working on an academic assignment or attending to an academic presentation, and who are very clearly paying attention to the task. That is, the observer is very confident that they are actually engaged in the academic activity intended by the teacher. In order to be considered academic in nature, the students must be receiving instruction from the teacher about some skill involved in reading, writing, spelling, grammar, math, etc., or some content involved in these or other areas (e.g., social studies, science, music), or they must be using such skills or content in completing an assignment. This category does include instructions from the teacher beginning an academic task, or necessary for completing an academic task. It does include activities after assignments which are related to academic skills--reading library books, for example. If students appear on-task and there is no

specific reason to suspect that a student is not on-task, then code as "definitely on-task."

Probably on-task, academic. Students falling in this category are those who are supposed to be working on an academic assignment or attending to an academic presentation, but who cannot confidently be said to be attending; however, they are not definitely off-task either. Students falling in this category might be those who are sitting at their seats with work in front of them, but who are looking up at the wall or out the window at the time the rating is taken. The student might be thinking about the task, he or she might be resting momentarily before returning to work, or he or she might be daydreaming. The observer cannot tell by simply watching the student; however, it is also clear to the observer that the teacher would not be likely to correct the student for his or her behavior at that time; that is, it is not clearly off-task, unsanctioned behavior.

Definitely on-task, procedural. Students classified in this category are those who are clearly engaged in some procedural activity which is preparatory to beginning an academic activity, or is necessary for finishing it. Such activities include moving through transition, sharpening pencils, getting out new materials or putting up used materials, turning in work, putting headings on paper, collecting books from other students. Sometimes procedural tasks involve the entire class (e.g., lining up to go next door for reading) and sometimes an individual will be doing something alone which can be considered procedural (such as turning in a paper). It also includes class procedures, such as lining up for lunch or dismissal, collecting money from students, or any other procedure initiated by the teacher for the sake of getting something done.

Probably on-task, procedural. Students classified here are those who are probably engaged in some procedural activity, but who are not clearly doing so. However, they are not obviously off-task or misbehaving. An example of this would be a student who is moving across the room, and the observer suspects that he or she is going to a skill box to pick up some materials, but it is not absolutely clear that he or she is doing this and not just wandering around. The same category would apply to someone who is waiting near a supply area or waiting near the teacher's desk, and the observer suspects that the wait is part of continuing some academic activity, but is not absolutely sure.

Off-task, unsanctioned. Students are classified in this category when they are very clearly misbehaving or doing something which the teacher does not permit. It is not essential that the teacher correct the students for them to be classified here. The definition of unsanctioned behavior depends on the rules each teacher has established for his or her class, and therefore, what is unsanctioned in one room may not be unsanctioned in another. Typically, however, behaviors which would be classified here would be: talking to one's neighbor when this is not allowed, cheating on a test, playing around in a disruptive manner instead of working, and being out of one's seat when this is not allowed.

Dead time. Students should be classified here when there is nothing specific which students are supposed to be doing and when they are not engaging in unsanctioned behavior. This would include students who are waiting for a transition as part of the whole class and students who have finished all of their assigned work and who have not been given anything else to do.

No data (Can't see). If there are students in the classroom who cannot be seen by the observer, they should be included in this category. This would include those who are working behind dividers and any student whose back is to the observer when it is necessary to see the face in order to make an accurate rating. This category would not include students who were out of the room at the time the rating was taken, since these students are not counted in the "# in room" for that particular rating.

Degree of Student Success

Taking a Student Engagement Rating includes an assessment of the apparent level of student success over the past ten minutes' activity. The observer should estimate and rate, during whatever activity when the SER is obtained, the extent to which students could perform the task demanded by the activity. If the activity has been procedural, then a rating should be made on the basis of the number of students who have been successful in following the procedure. When the activity has involved student performance or work on assignments, then the observer should estimate success from whatever aspects of student work that have been observed over the ten minute interval. If the activity has been a teacher presentation, then success must be judged by students' responses to teacher questions and any other indications of students' lack of understanding or failure to learn.

Level of individual student success means at a moderate or high level. That is, a student is able to perform or work at acceptable levels without encountering frequent failure. An occasional error or misunderstanding should not be considered as evidence for a lack of success. If a child does not engage in a seatwork assignment at all, assume no success for him/her. The following list of numbers correspond to differing apparent levels of success.

5 = Very high; all students appear successful (moderate or high) at this point in the activity

4 = High; most students appear successful, but one or two may not be able to perform the task

3 = Moderate; three or four do not appear to be performing successfully

2 = Fair; between four students and up to one-half of the class are unsuccessful

1 = Low; more than one-half of the class cannot do the task

If the activity is continued through more than one SER, the rating of success should pertain only to student performance during the time since the previous SER.

## Reference Notes


1. Griffin, G., Barnes, S., Defino, M., Edwards, S., Hukill, H., & O'Neal, S. Changing Teacher Practice: Final Report of an Experimental Study. Austin: The University of Texas at Austin, Research and Development Center for Teacher Education, in progress.
2. Evertson, C., Emmer, E., Sanford, J., Clements, B., Martin, J., & Worsham, M. Classroom Management Improvement Study Interim Progress Report: Research Design and Methodology. Austin: Research and Development Center for Teacher Education, The University of Texas at Austin, 1980.
3. Good, T., Grouws, D., Beckerman, T., Ebmeier, H., Flatt, L., & Schneeberger, S. Teacher Manual: Missouri Mathematics Effectiveness Project. Columbia: University of Missouri, September 1977.

## Appendix A

### A Guide to Classroom Protocol for the Observer

The following list of recommendations is intended to prevent problems from arising. Some of them deal with office management and some of them deal with the presence of observers in the schools. It is suggested that all observers read these carefully: the different items might serve as reminders to those already versed in classroom observation in addition to assisting novice observers. Should there be any remaining questions or concerns, it is advisable to discuss them with the person responsible for observer training.

1. On the first occasion to observe a teacher, the observer needs to introduce him- or herself and identify the research project being represented. The observer should ask where the teacher would like him/her to sit, yet be certain that most of the students and classroom are visible from that location. If the observer is aware that visibility may be a problem, he/she may request another seat.
2. On the day of the observation, the observer should arrive about 15 minutes early to begin a floor plan and seating chart.
3. All notes and forms should be completed in ink or ball-point pen; pencil wears and does not photocopy clearly.
4. Be certain that all identification field information at the tops of the forms and at the bottom of floor plans and seating charts is filled in. Check the SER form for completeness and accuracy as well. Be sure the total number of students (# in room)equals the next seven categories ("# def. on #," through "can't see").
5. After each observation, all materials should be checked in and filed in the appropriate places. A completed observation should yield the following items:

a. Observation Record form

b. floor plan and seating chart

c. Student Engagement Rating form

d. Summary Paragraph

6. One useful way to disseminate information of observers is through an Observer Bulletin Board. Notes with feedback, new information, observer assignments, and requests for clarification of completed forms may be posted there. If this system is used, it is imperative that observers be instructed to check the board frequently, especially as they begin to turn in materials.

7. The Barnes Teacher Observation Instrument should be consulted as needed during any given observation. If problems arise in coding a particular behavior, the observer may make a note and look it up in the guidelines later. Again, if a clear decision is not possible the observer should discuss that situation with the person responsible for observer training.

8. In coding, the observer should be as inconspicuous as possible. He or she should avoid standing up to look at someone more closely, making eye contact with students, or following students around the room.

9. The observer should not respond to students' comments or questions in any but the most perfunctory manner possible. Usually this type of reaction dissuades students from continuing to interact with an observer.

10. The observer should avoid leaving or entering the classroom in the middle of a teacher presentation. Leaving during a transition or during seatwork is preferable.

11. Observers should try to learn the names of the students being observed as soon as possible. Fill in the students' first names on seating charts as

they are heard, and include students' names wherever possible on the Observation Record form.

12. The promise of confidentiality to all participants must be kept. For this reason, observers are advised not to discuss a particular teacher or student with anyone.
13. Being inconspicuous means dressing in such a way that observers fit into the background. The best rule of thumb is to dress neatly and conservatively in a way that won't draw attention from pupils, teachers, or principals.
14. Part of being as inconspicuous as possible, and related to items 12 and 13 above, is talking as little as possible with teachers or other observers about the participants. Generally speaking, observers should try to remain involved and occupied with their coding. If a teacher speaks to an observer, his/her response should be pleasant, sympathetic, noncommital, and brief. Observers should not give advice or evaluative feedback of any kind on a teacher's performance. They are present only as observers and not as supervisors or critics.

## Appendix B

## Concepts and Terms Adapted from the Classroom Organization and Management Studies and Missouri Mathematics Effectiveness Project

Academic refers to facts, concepts, generalization, skills, i.e., the cognitive focus of teaching.

Dead Time* is an interval of time in which the student or students apparently have nothing that they are supposed to be doing. They are either between activities, or have been left temporarily by the teacher with no provision made for their becoming involved in an instructional activity.

Directions - guidelines that tell students how something is to be done to complete an academic task, i.e., the requirements of an assignment.

Inappropriate student behavior* includes inattentive or unsanctioned behaviors that involve only one or two students, such as whispering during a teacher presentation, writing notes, eating snacks, etc.

Interruptions* are defined here as distracting events which could force the teacher's attention (and often also the class's attention) to some unplanned event. This might include a messenger coming into the room from the office, an announcement over the loudspeaker, a fire drill, a fight in the room between two students, or a student being sick and being sent to the office.

Monitoring* means maintaining surveillance of the students in the classroom. A good monitor knows as much as possible about what is happening in the classroom at all times, with respect to both student behavior and academic progress. A teacher monitors students' work by circulating around the room, checking papers, redirecting the misguided, and encouraging appropriate behavior.

On-task* is another way of saying "doing what you are supposed to be doing"; off-task is another way of saying "doing what you are not supposed to be doing" or "not doing what you are supposed to be doing." For example, if a student is working on an assignment or is turning in an assignment at the teacher's desk, that student is on-task. On the other hand, if students are talking while the teacher is explaining an assignment, or if the teacher has instructed the students to take out paper and pencils and students are reading books instead, they are off-task. Note that whether or not a student is on- or off-task should not be judged as necessarily good or bad; it depends on the teaching situation.

Practice** here refers to the "controlled practice" in math where the students as a group work for increased speed, accuracy, and proficiency in completing a task or problem under the direct guidance of the teacher immediately after the teacher has explained the task or problem. Feedback on the correctness of responses is quite frequent (every 2 minutes).

Procedures* include routines established by the teacher to facilitate functioning of the class. A procedure is a set of guidelines about how to do something. If the procedure is used on a regular basis, it becomes a routine. The most important characteristic of a procedure is that it has been planned and presented to the class as a way of doing something. In classes with simple, clearly defined procedures, there is little confusion and shorter transition. Procedures may include lining up to sharpen pencils, distributing paper and books, using a "helper," collecting student work in designated folders, etc.

Rules* are similar to procedures in that they are established agreements about behavior in the classroom, but they are more often definitions of what not to do. When rules are carefully chosen and communicated by the teacher,

students have clear ideas of sanctioned and unsanctioned behavior in that class. Rules may govern when talking is allowed, when it is appropriate and inappropriate to move around the class, chew gum, eat snacks, etc.

Seatwork** is practice work that students complete individually at their desks.

Signals* or various cues may be used by a teacher to get students' attention, to tell the class to get quiet, or convey other messages. In some classrooms, a teacher may signal by standing at a certain place in the room, turning on the overhead projector, or making statements such as "All eyes on the board." In other classrooms, a teacher may signal by ringing a bell, snapping his/her fingers, turning off the lights, or making statements such as "Let me see your eyes." The teacher may also use posture, movement, or eye contact as signals. Signals are most effective when they are consistent and deliberately used. Often the teacher presents important signals to students at the beginning of the year and teaches the expected responses.

Transitions* are intervals of time between academic activities in which the primary activity is moving from one thing to another. This may include actual physical movement of students or it may be a matter of replacing some materials and getting out something else. The length and efficiency of transitions are factors affecting the smooth functioning of a class.

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* adapted from Evertson, C., Emmer, E., Sanford, J., Clements, B., Martin, J., & Worsham, M. Classroom Management Improvement Study Interim Progress Report: Research Design and Methodology. Austin: Research and Development Center for Teacher Education, The University of Texas at Austin, 1980.

** adapted from Good, T., Grouws, D., Beckerman, T., Ebmeier, H., Flatt, L., & Schneeberger, S. Teacher Manual: Missouri Mathematics Effectiveness Project, Columbia: University of Missouri, September 1977.

## Appendix C

## RANDOM NUMBER TABLE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2 | 1 | 7 | 8 | 5 | 4 | 1 | 1 | 0 | 1 |
| 4 | 7 | 4 | 5 | 8 | 6 | 4 | 8 | 0 | 9 |
| 4 | 0 | 4 | 0 | 5 | 6 | 8 | 0 | 3 | 2 |
| 7 | 1 | 2 | 0 | 9 | 9 | 2 | 0 | 6 | 1 |
| 8 | 5 | 5 | 6 | 1 | 2 | 9 | 6 | 7 | 1 |
| 9 | 5 | 8 | 8 | 9 | 5 | 7 | 0 | 6 | 7 |
| 9 | 2 | 6 | 1 | 3 | 8 | 9 | 7 | 1 | 9 |
| 6 | 7 | 6 | 6 | 7 | 6 | 0 | 6 | 3 | 1 |
| 2 | 4 | 7 | 0 | 0 | 7 | 1 | 5 | 9 | 4 |
| 7 | 6 | 4 | 7 | 9 | 6 | 8 | 5 | 6 | 2 |

## Appendix D

### A Brief Description of Observer Training

Ten observers were trained to use the observation system. The observation system consisted of two quantitative instruments (Barnes Teacher Observation Instrument, p. 3, and Student Engagement Rating form, p. 17) and one qualitative instrument (Summary Paragraph, p. 16). The first day of training included an overview of the Changing Teacher Practice Study and a general introduction to the research background upon which the study was based. An explanation of the categories and individual codes on the Barnes Teacher Observation Instrument followed. Observers then practiced recognizing the teaching behaviors on the Barnes Teacher Observation Instrument by coding typed narratives and videotapes of classrooms. Observers coded only brief, two-page sections of the narratives. After the two pages were coded, the group discussed the responses. The same technique of short practice sessions with frequent feedback and reinforcement was also used with the videotapes (five minute segments) on the first day of training.

The second day of training included more practice on the Barnes Teacher Observation Instrument and training in the use of the Student Engagement Rating form and the writing of the Summary Paragraph. Because videotapes more closely approximated the actual classroom, more emphasis was placed upon the videotapes on the second day. Again practice was interspersed with discussion. Since each classroom observation in the Changing Teacher Practice Study was scheduled to be one hour in length, the length of time spent coding videotapes was gradually increased. Coders eventually coded continually for a period of thirty minutes using the Barnes Teacher Observation Instrument and the Student Engagement Rating form. After each videotape a Summary Paragraph was also written.

After the two days of training, measures of interobserver agreement were taken. Interobserver agreement for the frequencies of teaching behaviors on the Barnes Teacher Observation Instrument was .89. Interobserver agreement on the Student Engagement Rating form was .83. Since the Summary Paragraph was to be a source of impressionistic data, no quantitative standards were applied.

Appendix E

Examples of Completed Forms

| Time | Teaching Behavior | Example/ Name/ Specific Rule or Procedure | Student Reaction to Teacher Request or Direction |
|---|---|---|---|
| | B9 | | |
| | B11 | | |
| | A2 | | |
| 9:54 (4) | B4a | laminated assignment poster board | |
| | B11 | | |
| | C10 | David | |
| | F2, F3 | | |
| | B11 | | |
| | I21 | | |
| | C10 | | |
| | B11 | | |
| | J4 | names on board under happy face | |
| | I25 | | |
| 9:59 | I33, I21 | "Bears group is next" | |
| | J1 | | |
| | B11 | | |
| | I17 | | |
| | J1 | Richard, we wasted two minutes | |
| | B4a | teachers manual | |
| 10:00 | I11 | We're taking a test today; take pencils & pass down | |
| | J1 | Tammy | |
| | B11 | | |
| | J1 | | |
| | I1, J1, I33 | "Sara, shhhh!" with finger to lips | |
| | B11 | | |

Teacher No. 42 Observation Record Date 10-20-82

School 20 Observer 75 Page 6

Appendix E (continued)

STUDENT ENGAGEMENT RATINGS

Teacher # 42 School # 20 Observer # 75

# Students 30 Grade 2 Date 10-20-82 (AM) PM Page 1 of 2

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Time | 9:23 | 9:33 | 9:44 | 9:54 | 10:04 |
| Format # of adults | 4 \| 1 | 4 \| 2 | 4 \| 1 | 4 \| 2 | 4 \| 2 |
| Subj.-T. | 1 | 2 | 1 | 1 | 1 |
| Subj.-Ss. | 1 | 5 | 1 | 1 | 17(1/14) |
| # in room | 20 | 20 | 20 | 27 | 27 |
| # def. on, acad. | 20 | 19 | 19 | 18 | 20 |
| # prob. on, acad. | | | 1 | 1 | |
| # def. on, proc. | | 1 | | 1 | 7 |
| # prob. on, proc. | | | | | |
| # off, sanc. | | | | | |
| # off, unsanc. | | | | | |
| # dead | | | | | |
| # can't see | | | | 7 | |
| Ss Success | 5 | 5 | 5 | 5 | 4 |

| | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|
| Time | 10:14 | 10:24 | 10:34 | | |
| Format # of adults | 4 \| 2 | 4 \| 2 | 4 \| 2 | \| | \| |
| Subj.-T. | 12 | 12 | 1 | | |
| Sub.-Ss. | 1 | 1 | 1 | | |
| # in room | 27 | 27 | 27 | | |
| # def. on, acad. | 25 | 26 | 25 | | |
| # prob. on, acad. | | | 2 | | |
| # def. on, proc. | 1 | | | | |
| # prob. on, proc. | | | | | |
| # off, sanc. | 1 | 1 | | | |
| # off, unsanc. | | | | | |
| # dead | | | | | |
| # can't see | | | | | |
| Ss Success | 5 | 4 | 3 | | |

Summary Paragraph

critical incidents: none

behavior patterns: Clear tendency to say "shhh!" with finger to lips. Uses a dinner bell to signal students, sometimes to change groups, and also to return to whole group. She will ask many product questions, then a process question - "How do you know this word is _____ and not _____ (some other one)?" Whenever students couldn't answer the process question, she would revert to a set of product questions such as "What letter does this start with?" or "What sound does it make?" leading them through steps, until students do generate the answer.

general impression: The pace is constant; the work all morning is reading with no let up. Left the observer feeling drained. The teacher was very active and interacted in a comfortable manner with her students.

School 20 Teacher 42

Observer 75 Date/Page 10-20-82

## Appendix F

### Research Basis for the Barnes Teacher Observation Instrument

The teacher behaviors forming the basis for the Barnes Teacher Observation Instrument were identified by the line of research generally referred to as "teacher effectiveness research" (Medley, 1980). In those studies teachers and students in a variety of settings were observed for periods of time and their behaviors recorded. From these observational records, teacher behaviors which related to student learning as measured by standardized tests were then identified. An operational definition of the effective teacher emerged from this line of research. The effective teacher is the teacher whose classes regularly score higher on standardized achievement tests than do classes of other teachers of similar students after entering differences among classes are statistically removed (Good & Grouws, 1977; Brophy & Evertson, Note 1; Good & Grouws, Note 2; Stallings, Needels, & Stayrook, Note 3).

At the present some effective behaviors for some grades and some subjects and with some groups of students have been identified and tested. Certain dangers do exist for misuse and overgeneralization of the findings from teacher effectiveness research. Most studies produced correlational results. Researchers themselves have been careful to point out the limitations of this type of research: Consumers are cautioned not to assume causal relationships between teaching behaviors and achievement. Because the researchers were unable in most cases to control many variables that impact upon achievement, the findings cannot be used as recipes for successful teaching. Consumers have also been cautioned not to overgeneralize even these correlational relationships to new grade levels or subjects or for all types of students since some evidence, as well as common sense, suggests that these factors interact with effective behaviors (Brophy & Evertson, Note 1). Keeping these

limitations in mind, specific findings in the broadly-defined areas of learning environment, management of behavior, classroom instruction, and teaching style can be identified to serve as content in inservice training.

Criteria for Selection of Research Studies

The specific findings serving as content for inservice training were derived from research studies which met several criteria. Studies were conducted using research methodologies which could be verified as being procedurally rigorous and not open to interpretive question. The findings, which emerged from "real" classroom settings rather than laboratory settings, are amenable to precise and clear translations to practitioners, and relate directly to demonstrable concerns and/or problems of teachers and teacher educators (Griffin, Note 4). Recognized experts in the field were also consulted and their recommendations of studies which met these criteria were considered.

Descriptions of Selected Studies

Three sets of major research efforts provide most of the findings selected for inclusion in the inservice content. The major topics of interest in one group of studies were management and organization of the classroom. The work of Brophy and Evertson on the Correlates of Effective Teaching Project began with correlational studies in the second and third grades. Other studies based upon their work eventually moved into other grades and subjects, including an experimental study in reading at the first grade level and a descriptive study in math and English at the junior high level.

The second set of studies which began with the work of Good and Grouws on the Missouri Mathematics Effectiveness Project were correlational studies of teachers and students in third and fourth grade mathematics. Later, experimental studies based on these findings were conducted in sixth, eighth,

and ninth grade math. Major emphasis in these studies has been on systematic instruction.

The third set of studies began with the work of Stallings on the Follow Through evaluation of the Planned Variation programs. Data for the correlational study were collected for reading and math in grades 1 and 3. These findings served as a basis for extending research into the teaching of basic reading skills in grades 7-12. Both a correlational study and an experimental study were conducted at this level. The emphasis in these studies has been on a program of effective instruction in reading skills.

Other studies have contributed in some way to this synthesis of findings. The work on the Follow Through evaluation in Florida by Soar and Soar and the work by McDonald and Elias on the Beginning Teacher Evaluation Study contribute some important findings.

Caution on variable names. Due to the problems posed when various studies coin their own operational definitions for variables, some caution is advised in interpreting this compilation of findings. Efforts have been made to examine original coding and observation instruments in order to determine exactly what behaviors comprised a variable. In some cases, inferences were made which may, of course, be in error. The reader will notice that variable terms or descriptions may not be exactly those stated in an original report. This occurs because an effort was made to reduce the multitude of variables to a more manageable number by combining categories which appeared identical or very similar but carried different labels across different studies.

Another problem involves the indication of repeated significance for some variables in replication studies. For instance, in some cases researchers on the first study in a program of research found significant relationships between a particular variable and student achievement. In the next study of

the set, researchers may have designed an experimental treatment based on those significant findings. It was felt that if that treatment was significant in increasing achievement, then the variables involved should again be credited with significance even if the researcher did not explicitly state that it was so in the report. The experimental study, in effect, added supportive evidence for the significance of that variable.

## Selected Findings on the Learning Environment

One area of teacher effectiveness research producing some of the most consistent findings has been research on the learning environment. Each study included in this review found positive relationships between classrooms broadly described as "work-," "task-" or "academically-oriented" and student achievement gains (Emmer, Evertson, & Anderson, 1980; Good & Grouws, 1979; Brophy & Evertson, Note 1; Evertson, Anderson, & Brophy, Note 5; Evertson, Emmer, & Brophy, Note 6; Good & Grouws, Note 7; Stallings & Kaskowitz, Note 8; Stallings, Note 9; Stallings, Needels, & Stayrook, Note 3). The terms, "work-," "task-," or "academically-oriented," usually describe classrooms where teachers expect and require students to pay attention, to work persistently toward completion of assignments, to exhibit cooperative attitudes, and, in general, to concentrate on academic activities rather than socializing. The amount of time allocated to academic tasks has been significantly related to student achievement in several studies (Evertson, Anderson, & Brophy, Note 5; McDonald & Elias, Note 10.)

This general description of the learning environment associated with effective teaching is composed of the collection of specific teacher behaviors found separately in different projects. These behaviors include having "high achievement expectations" for students regardless of their entering ability levels (Good & Grouws, 1977; Brophy & Evertson, Note 1), assuming the role of

"instructional leader," taking personal "responsibility for students' learning" (Emmer, Evertson, & Anderson, 1980; Good & Grouws, 1977; Brophy & Evertson, Note 1), and "communicating expected behaviors and attitudes" explicitly to students (Emmer, Evertson, & Anderson, 1980; Brophy & Evertson, Note 1).

Another broad factor, "a warm, supportive environment," was also consistently found to be positively related to student achievement in most of the studies reviewed here (Emmer, Evertson, & Anderson, 1980; Good & Grouws, 1979; Brophy & Evertson, Note 1; ; Evertson, Anderson, & Brophy, Note 5; Stallings, Needels, & Stayrook, Note 3). To achieve this warm, supportive environment, some teachers "praise" students frequently when praise is deserved, "respect student contributions" to class (Evertson, Anderson, & Brophy, Note 5), and provide "specific praise" which is offered in an appropriate manner (Anderson, Evertson, & Brophy, 1979). Effective teachers are generally confident and enthusiastic (Evertson, Anderson, & Brophy, Note 5). Having a warm, supportive environment is apparently more beneficial for low socioeconomic status (SES) students who respond better to more "individual, private contacts" with the teacher (Brophy & Evertson, Note 1; Evertson, Anderson, & Brophy, Note 5) and to more positive "teacher affect" in general (Brophy & Evertson, Note 1). Stallings (Note 9) reports significant positive relationships between "all positive interactions" and student achievement and significant negative relations between "all negative interactions" and student achievement. Students of higher abilities benefit from learning situations where the teacher allows them some "autonomy" (Brophy & Evertson, Note 1). Most students regardless of ability level apparently benefit from teachers who maintain a basically "orderly classroom" (Good & Grouws, 1977; 1979) and do not allow a prevalence of "social" conversation

(Stallings, Needels, & Stayrook, Note 3). The optimal limits for social conversation and creative disorder have yet to be established.

In summary, teachers who establish both a task- or work-oriented atmosphere in the classroom and a warm, supportive environment are providing students with a successful learning environment.

## Selected Findings on Management of Behavior

The findings related to management of behavior are organized here into those teaching behaviors that concern administration of the classroom, prevention of misbehavior, and reaction to misbehavior. The studies examined here essentially agree with Kounin (1970) that effective teachers actively seek to prevent misbehavior through anticipation of problems and planning how to avoid those problems, rather than waiting for misbehavior to occur and then disciplining the students.

### Classroom Administration

In the area of classroom administration the effective teacher is described as being "well-organized" (Stallings, Needels, and Stayrook, Note 3). Evidence that the teacher is well-organized comes from several observable behaviors. These include having "clear rules and procedures" which will probably be written and may be posted for students to read (Emmer, Evertson, & Anderson, 1980). Rules and procedures are so important to organization that they may actually be taught to the students using generally recognized principles of instruction where the teacher introduces the rules, gives a rationale for the rules, demonstrates and gives examples, monitors as the students practice the rule, provides feedback, and reteaches, if necessary (Emmer, Evertson, & Anderson, 1980). Effective teachers are able to establish routines and procedures to guide and regulate pupil behaviors while still maintaining a desirable degree of flexibility in the classroom. Rules and

procedures are used to reduce the complexity of the classroom for both students and teachers, not to hamper the teacher's decision-making process during class.

When the time for class arrives, effective teachers treat that time as a valuable resource. These teachers begin class promptly and move students from one activity to another smoothly and quickly (Brophy & Evertson, Note 1; Evertson, Emmer, & Brophy, Note 6). To encourage this ease of transition, classrooms are arranged so that students may move to new areas or pick up needed supplies with as little disruption as possible to other students or the teacher. Effective teachers also take into account the need to see and be seen during all class activities. As a consequence, furniture is arranged so that all students can see chalkboards, assignment sheets, or other areas used by the teacher when communicating with the class, and the teacher can see all students most of the time (Emmer, Evertson, & Anderson, 1980).

In summary, the effective teacher-administrator decides which behaviors and attitudes are acceptable, designs classroom procedures and rules to foster those behaviors and attitudes, and actually teaches rules and procedures in an instructional setting. Students are surrounded by the attitude and supporting behaviors that indicate time is precious and not to be wasted by disruptions.

Prevention of Misbehaviors

The general behavior used by effective teachers to prevent student misbehavior is to be actively involved with the students for most of the classtime (Good & Grouws, 1977; 1979; Brophy & Evertson, Note 1; Evertson, Anderson, & Brophy, Note 5; Stallings, Note 9; Stallings, Needels, & Stayrook, Note 3). Effective teachers do not begin class with roll, give a short explanation of the day's lesson, make a long individual reading or seatwork assignment, and then settle down at the desk to grade papers or make lesson

plans. Effective teachers provide active instruction (described in more detail in a later section) to much of the class and limit the time spent by students in seatwork (Evertson, Anderson, & Brophy, Note 5). When effective teachers do make seatwork assignments, students are reminded that they are accountable both for their behavior and their assignment (Emmer, Evertson, & Anderson, 1980; Good & Grouws, 1979; Evertson, Anderson, & Brophy, Note 5). The effective teachers monitor the classroom carefully to check for both success in the task and appropriate behavior (Anderson, Evertson, & Brophy, 1979; Emmer, Evertson, & Anderson, 1980; Good & Grouws, 1979; Brophy & Evertson, Note 1; Evertson, Emmer, & Brophy, Note 6; Stallings, Needels, & Stayrook, Note 3). However, they do not become involved with individuals to the exclusion of the rest of the classroom (Stallings, Needels, & Stayrook, Note 3) for long periods of time.

Effective teachers tend to respond with certain behaviors when they spot problems beginning to develop. Emmer, Evertson, and Anderson (1980) found that effective teachers may "signal the appropriate behavior" by using a previously taught signal or sign to warn students when they are getting off-task, "establish eye contact" with potentially disruptive students, and use a "variety of rewards" to provide positive reinforcement to those students who successfully comply with rules and procedures. In summary, effective teachers try to prevent misbehavior by maintaining active involvement with their students even during seatwork, and reacting to problem situations as they are developing.

Reaction to Misbehavior

Despite the best classroom organization and efforts in prevention, misbehavior by students sometimes occurs. When this happens, effective teachers are quick to respond. This is an important behavior since some

styles of discipline suggest ignoring misbehavior. Effective teachers not only react, they usually stop misbehavior quickly (Emmer, Evertson, & Anderson, 1980; Evertson, Emmer, & Brophy, Note 6; Stallings, Note 9).

The effective teachers name specific students rather than refer to the whole class when they act to stop misbehavior. They cite specific rules which are being broken rather than making general requests for order (Emmer, Evertson, & Anderson, 1980). When a rule is broken, effective teachers are "consistent" in enforcement (Evertson, Emmer, & Brophy, Note 6) and tend to use "milder, more informative" forms of punishment (Brophy & Evertson, Note 1). In summary, the effective teachers react to misbehavior promptly, focus on specific students and rules, and enforce rules consistently.

## Selected Findings in Classroom Instruction

The findings related to classroom instruction are organized into teaching behaviors that prepare students for the lesson, present the content of the lesson, enable students to practice after the presentation, and evaluate student learning. Most of the studies examined for this synthesis support what Good and Grouws (1979) have called a "system of instruction."

### Preparing Students for the Lesson

Part of a systematic instruction pattern involves preparing students for a new lesson. Effective teachers begin with the basics, securing students' attention before proceeding with the lesson (Brophy & Evertson, Note 1). From this point effective teachers use one of several strategies including "stating objectives of the lesson clearly" and explicitly for students (Emmer, Evertson, & Anderson, 1980), giving a rationale (Anderson, Evertson, & Brophy, 1979; Emmer, Evertson, & Anderson, 1980; Good & Grouws, 1979), or "reviewing" content of previous lessons needed for the upcoming presentation (Good & Grouws, 1979). These strategies apparently motivate the students toward

academic achievement and orient the students to a particular subject at a particular time. In summary, the effective teacher makes sure the students are paying attention and have some idea, not only of what they are going to do, but why they are going to do it.

Teacher Presentation of the Lesson

When effective teachers conduct a lesson over new material, they tend to take an active part in presenting that material (Good & Grouws, 1979; Evertson, Anderson, & Brophy, Note 5; Stallings, Note 9). Effective teachers are "clear in their presentation" of content (Emmer, Evertson, & Anderson, 1980; Good & Grouws, 1977; 1979; Brophy & Evertson, Note 1; Evertson, Emmer, & Brophy, Note 6) and present that material in small steps, especially when they are teaching low ability students (Brophy & Evertson, Note 1). Often the teacher presentation involves teacher-led "discussion" (Evertson, Anderson, & Brophy, Note 5; Stallings & Kaskowitz, Note 8; Stallings, Needels, & Stayrook, Note 3) and "pupil recitation" (Stallings & Kaskowitz, Note 8) rather than lengthy lecturing by the teacher. Apparently the effective teacher attempts to expose students to the new material, move along at a reasonably "brisk pace," and maintain "active participation by the students" simultaneously (Anderson, Evertson, & Brophy, 1979; Emmer, Evertson, & Anderson, 1980; Good & Grouws, 1977; Brophy & Evertson, Note 1; Evertson, Emmer, & Brophy, Note 6; Stallings, Note 9). During discussion/recitation, effective teachers ask questions that students can answer with a "high degree of success" (Emmer, Evertson, & Anderson, 1980; Brophy & Evertson, Note 1). Effective teachers "vary the cognitive level" of the question according to the ability level of the students (Evertson, Emmer, & Brophy, 1980; Brophy & Evertson, Note 1) or the instructional goal. Soar and Soar (1972) found that students profited from "highly focused learning tasks" when the measure of success was concrete

learning. However, when the measure of success was abstract, complex learning, students profited more from "moderately focused learning tasks" and "information giving and receiving" between teacher and students.

After the presentation of new material the effective teachers often conduct some form of "controlled practice" over the new material with the whole class (Anderson, Evertson, & Brophy, 1979; Good & Grouws, 1979; Brophy & Evertson, Note 1; Stallings, Needels, & Stayrook, Note 3). The teachers "monitor student responses" carefully to be sure that students are performing successfully. While students practice, the effective teachers can "provide feedback" on student performance. Stallings and Kaskowitz (Note 8) found that both "positive feedback" and "negative feedback" were positively related to achievement in elementary grades but in secondary basic skills classes "negative feedback" was negatively related (Stallings, Note 9). In other studies feedback took the form of "praise" for academic performance (Evertson, Anderson, & Brophy, Note 5) or simple "nonevaluative feedback" (Good & Grouws, 1977). In the case of incorrect responses by students effective teachers provide "supportive" but corrective feedback (Anderson, Evertson, & Brophy, 1979; Stallings & Kaskowitz, Note 8; Stallings, Note 9; Stallings, Needels, & Stayrook, Note 3) or provide "process feedback" showing the student how to achieve the correct answer (Good & Grouws, 1977). The use of controlled practice during or after the presentation allows the effective teacher to catch errors early before students begin work on their own (Anderson, Evertson, & Brophy, 1979; Brophy & Evertson, Note 1). By attending to student understanding of both content and teacher directions at this point in the lesson, effective teachers increase the opportunities for students to be successful in subsequent seatwork and homework (Good & Grouws, 1979; Brophy & Evertson, Note 1). In summary, effective teachers actively lead instruction

while maintaining both student participation and student expectations for success. The effective teachers also have students practice new material while the teacher checks for student understanding of both content and directions before the teacher allows students to begin individual seatwork.

Student Practice After the Presentation

When the effective teacher is reasonably satisfied that students understand the content, students are given a common seatwork assignment for a small portion of the class period (Good & Grouws, 1979; Evertson, Anderson, & Brophy, Note 5; Stallings, Needels, & Stayrook, Note 3). During seatwork the effective teachers continue to monitor the class and physically move about the room (Good & Grouws, 1979). They do not take seatwork as an opportunity to catch up on grading or next week's lesson plans (Good & Grouws, 1977). If a few students are still confused, the effective teacher gets the class started on the assignment and then works with individuals. Students are held "accountable" for both their assignment and their use of time during seatwork (Good & Grouws, 1979; Note 7). Effective teachers do not usually make long seatwork assignments or long "silent" or "leisure" reading assignments (Stallings, Needels, & Stayrook, Note 3), but they do regularly assign some small amount of "homework" (Good & Grouws, 1977; 1979; Brophy & Evertson, Note 1; Evertson, Emmer, & Brophy, Note 6; Good & Grouws, Note 7) that provides students the opportunity for further drill and practice over the lesson. In summary, effective teachers provide individual practice opportunities, but limit the time students work individually and continue to stay actively involved with the class.

## Selected Findings on Teaching Style

The findings on teaching behaviors related to teaching style are organized into teacher interactions with students during instruction and organization of instructional activities. Findings on teaching style again reflect active involvement by the teacher as well as involvement by students.

### Interactions with Students

Effective teachers provide opportunities during instruction for extensive discussion or "questioning." This is one sanctioned way teachers allow students to receive teachers' attention (Evertson, Anderson, & Brophy, Note 5). Teachers may initiate participation by one of several methods - "calling on specific students in a systematic pattern" (Brophy & Evertson, Note 1), accepting "volunteers" (Good & Grouws, 1977; Evertson, Anderson, & Brophy, Note 5) or accepting "call outs" in low ability classes (Evertson, Anderson, & Brophy, Note 5) or middle ability classes (Good & Grouws, 1977). Effective teachers also "wait for some response" from students, especially low ability students (Brophy & Evertson, Note 1). If the student gives an incorrect response to the question, effective teachers may "probe," "rephrase," "prompt" (Evertson, Anderson, & Brophy, Note 5; Stallings, Note 9; Stallings, Needels, & Stayrook, Note 3) or "provide the correct answer" to the question (Brophy & Evertson, Note 1). If the student gives a partially correct response, the effective teacher "accepts the substance" of the correct parts of the answer, provides some feedback to the student, and moves the lesson along (Brophy & Evertson, Note 1). These teacher responses to student answers help maintain a "brisk pace" in class discussions (Good & Grouws, 1979; Evertson, Anderson, & Brophy, Note 5). A brisk pace is especially helpful to classes with higher ability students (Brophy & Evertson, Note 1). Effective teachers may ask questions of varying cognitive levels from simple, straightforward requests

for verbatim recall to questions requiring students to state an opinion or process questions asking students to describe how they arrived at an answer (Good & Grouws, 1977; Evertson, Anderson, & Brophy, Note 5; Evertson, Emmer, & Brophy, Note 6). Effective teachers stress students' understanding of the meaning of the content in question rather than the form of the students' responses (Good & Grouws, 1977; 1979). When questioning students over the lesson, effective teachers ask questions which students can answer at high rates of success, 70% for high ability students and 80% for lower ability students (Brophy & Evertson, Note 1). In summary, effective teachers encourage interactions where students are expected to participate and to be challenged but still be successful.

Organized Instructional Activities

The effective teacher organizes instructional activities to provide students with activities that are interesting and meaningful and to use grouping patterns which fit the task. The effective teacher recognizes the basic importance of motivation for students. One teaching strategy associated with motivation is "relating class content to the interests of the students" (Emmer, Evertson, & Anderson, 1980). Effective teachers "follow prescribed curriculum" (Brophy & Evertson, Note 1), move briskly through that curriculum, especially with high ability students (Evertson, Anderson, & Brophy, Note 5), and rely heavily on "workbooks and textbooks" (Stallings & Kaskowitz, Note 8; Stallings, Note 9). In appropriate situations effective teachers use "special materials" which are matched to the ability level of the students, especially with low ability students (Emmer, Evertson, & Anderson, 1980; Brophy & Evertson, Note 1).

Most studies found strong positive associations between certain grouping patterns and student achievement. "Whole class" or "large group instruction"

is the most prominent grouping pattern (Good & Grouws, 1979; Stallings & Kaskowitz, Note 8). In the report on Phase I of a project designed to teach basic skills in secondary schools, Stallings (Note 9) reports positive relationships for "small group instruction" and students taking turns "reading aloud." Strong results related to grouping were also found for ability grouping by Stallings, Needels, & Stayrook (Note 3). Here low ability students did better in homogeneously grouped classes where instruction was at a slower pace but fast enough to maintain interest.

In summary, effective teachers carefully organize instructional activities to both motivate students and provide appropriate practice in the lesson. They also teach most lessons to the whole class and use small groups only for particular instructional purposes or subjects.

## Summary

This background of research on teaching from large-scale, classroom-based studies provides a profile of one definition only of an "effective teacher," where effectiveness is measured by student outcomes on standardized tests. In addition, the profile is limited to areas of teaching which have recently received heavy research emphases; learning environment, management of behavior, classroom instruction, and teaching style (in the terms of this synthesis). While it is recognized that these areas do not form a complete picture of teaching, the findings do indicate some teaching behaviors found to be associated with increased student achievement in math and reading at the elementary school level. The effective teachers in these studies tended to establish a work-orientation in the classroom while maintaining a warm, supportive environment. They also are well-organized and place much emphasis on management of the classroom in order to optimize the productive use of time. During class effective teachers stay actively involved with students to

prevent misbehavior and intervene promptly to stop misbehavior. When presenting new material many effective teachers use a systematic instruction plan which includes gaining students' attention before beginning the lesson, making a clear presentation, allowing students to practice new skills, monitoring and providing feedback, assigning individual seatwork, and evaluating students' responses. Effective teachers generally interact with the whole class during classtime and move students through discussions at a brisk pace with a high level of student success.

From these results teacher educators can develop programs to train persons in the particular skills that have been demonstrated by effective teachers. These research findings support many common teaching practices and answer criticisms that educational research has no relationship to real classroom problems and situations. While there are other conceptions of good teaching which view teaching as an art or as a job requiring certain philosophical or psychological orientations, the purpose of this review was to examine the findings of classroom-based research and not the assumptions underlying this particular approach to the study of teaching. At present if school emphasis is on achievement in basic skills as measured by standardized achievement tests, then this research provides teachers with behaviors that facilitate increases in achievement and still allow adaptation to fit particular classroom needs. Finally, these findings are guidelines for increased effectiveness and are not intended to be foolproof recipes for teaching.

The reader who is interested in a more detailed discussion of the research on teaching, presented in a brief form here, is referred to Barnes (Note 11). Good (Note 12) provides a thoughtful discussion of the state of

the art in the research on classroom teaching and generates avenues for further research.

Reference Notes


1. Brophy, J., & Evertson, C. Process-product correlations in the Texas teacher effectiveness study: Final Report (R&D Report 74-4). Austin, TX: The University of Texas at Austin, Research and Development Center for Teacher Education, June 1974.
2. Good, T., & Grouws, D. Experimental research in secondary mathematics classrooms: Working with teachers (NIE-G-79-0103). Columbia, MO: The University of Missouri, May 1981. (Experimental work in junior high classes.)
3. Stallings, J., Needels, M., & Stayrook, N. How to change the process of teaching basic reading skills in secondary schools, Phase II and III, Final Report. Menlo Park, CA: SRI International, 1979.
4. Griffin, G.A. Technical proposal. Austin, TX: The University of Texas at Austin, Research and Development Center for Teacher Education, October 1980.
5. Evertson, C. M., Anderson, L. M., & Brophy, J. E. The Texas junior high school study: Final report of process-outcome relationships, Executive Summary (R&D Report 4061, COET 78-1). Austin, TX: The University of Texas at Austin, Research and Development Center for Teacher Education, 1978.
6. Evertson, C.M., Emmer, E.T., & Brophy, J.E. Predictors of effective teaching in junior high mathematics classrooms (R&D Report 4069). Austin, TX: The University of Texas at Austin, Research and Development Center for Teacher Education, 1980.
7. Good, T.L., & Grouws, D.A. Experimental research in secondary

mathematics classrooms: Working with teachers (NIE-G-79-0103). Columbia, MO: The University of Missouri, May 1981. (Experimental study II: Verbal problem solving.)

8. Stallings, J., & Kaskowitz, D. Follow through classroom observation evaluation, 1972-1973. Menlo Park, CA: Stanford Research Institute, 1974.
9. Stallings, J.A. Teaching basic reading skills in secondary schools. A paper presented at American Educational Research Association, Toronto, CAN, March 1978.
10. McDonald, F., & Elias, P. The effects of teaching performance on pupil learning. Final report, Volume 1, Beginning Teacher Evaluation Study, Phase II, 1974-1976. Princeton, NJ: Educational Testing Service, 1976.
11. Barnes, S. Synthesis of selected research on teaching findings. Austin, TX: The University of Texas at Austin, Research and Development Center for Teacher Education, 1981.
12. Good, T. Classroom research: What we know and what we need to know (R&D Report No. 9018). Austin, TX: The University of Texas at Austin, Research and Development Center for Teacher Education, 1981.

References

Anderson, L.M., Evertson, C.M., & Brophy, J.E. An experimental study of effective teaching in first-grade reading groups. The Elementary School Journal, 1979, 79(4), 193-223.

Emmer, E.T., Evertson, C.M., & Anderson, L.M. Effective classroom management at the beginning of the school year. The Elementary School Journal, 1980, 80, 219-231.

Good, T.L., & Grouws, D.A. Teaching effects: A process-product study in fourth-grade mathematics classrooms. Journal of Teacher Education, 1977, 28(3), 49-84.

Good, T.L., & Grouws, D.A. The Missouri mathematics effectiveness project: An experimental study in fourth-grade classrooms. Journal of Educational Pyschology, 1979, 71(3), 355-362.

Kounin, J.S. Discipline and group management in classrooms. New York: Holt, 1979.

Medley, D.M. The effectiveness of teachers. In P. Peterson & H. Walberg (Eds.), Research on teaching: Concepts, findings, and implications. Berkeley, CA: McCutchan, 1979.

Soar, R., & Soar, R. An empirical analysis of selected Follow Through programs: An example of a process approach to evaluation. In I.J. Gordon (Ed.), Early Childhood Education. Chicago: National Society for the Study of Education, 1972.

Appendix G

Checklist for Observations

_____Receive schedule

_____Check materials needed for observation

_____observation instrument

_____observation record

_____SER form

_____random number sheet

_____Conduct observation

_____Turn in materials

_____observation record form

_____summary paragraph

_____SER form

_____floor plan and seating chart

*Be sure to check over Observation Record for cryptic notes, incomplete examples, etc.